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Anomalous reactions of sodium diethyl phosphite and of triethyl phosphite with some halogenated derivates

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Abstract

1. Dinaphthylchloromethane, dinaphthylbromomethane, 9-chlorofluorine and 9-bromofluorine did not react in the experimental conditions. 2. Phenanthrene was formed by reaction of sodium diethyl phosphite and triethyl phosphite with 9,10-dibromophenanthrene. 3. Dibenzoylbromomethane and tribenzoylbromomethane react with sodium diethyl phosphite or with triethyl phosphite with formation of dibenzoylmethane and tribenzoylmethane, 4. Bromoindandione and the ethyl ester of bromoindandionecalboxylic acid react with sodium diethyl phosphite or with triethyl phosphite with formation of indandione or of products of dimerization of the free indandionyl radical. 5. The most probable reaction scheme, which explains the anomalous course of the bromo compounds with sodium diethyl phosphite or triethyl phosphate, is one involving the assumption of formation of free radicals as intermediate products.

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